AMSAT News Service Weekly Bulletins
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AMSAT NEWS SERVICE
ANS-077

ANS is a free, weekly, news and information service of AMSAT North America, The Radio Amateur Satellite Corporation. ANS reports on the activities of a worldwide group of Amateur Radio operators who share an active interest in designing, building, launching and communicating through analog and digital Amateur Radio satellites.

Please send any amateur satellite news or reports to:

ans-editor@amsat.org

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SB SAT @ AMSAT $ANS-077.01
AMSAT/TAPR Banquet at Dayton 2007

AMSAT News Service Bulletin 077.01
  From AMSAT HQ SILVER SPRING, MD.
March 18, 2007
To All RADIO AMATEURS
BID: $ANS-077.01

AMSAT is pleased to announce the first AMSAT/TAPR Banquet will be held Friday evening May 18,2007 at the Air Force Museum in Dayton, OH in conjunction with the 2007 Dayton Hamvention. The two groups share many members and this gives everyone the opportunity to attend both dinners.
 The "Dinner Under the Wings" festivities will begin at 18:00 with a cash bar and appetizers in the Air Power Gallery (World War II). The buffet dinner will be served at 19:00 in the Cold War area. Following a few AMSAT and TAPR announcements after dinner you will be free to roam the museum. The price for the dinner is $35.00 per person and includes appetizers, salad, meal, dessert, coffee, iced tea, tax and gratuity. See http://www.nationalmuseum.af.mil/ for information about the museum.

The museum will close at 22:00 and everyone must be out of the museum by then.

Vegetarian meals are available if selected when you purchase your ticket.

Reservations are required. These can be purchased online at the AMSAT Store
http://www.amsat-na.com/item.php?id=100133
or from the TAPR web site at http://www.tapr.org/dayton.html

There will be no Banquet ticket sales at the AMSAT booth this year. We expect this to be a very popular event, so reserve your tickets early.

Reservations will close this year on Monday night, May 14,2007 to allow us to give the museum a count on Tuesday.

Everyone is responsible for their own transportation to and from the museum.

There will be no banquet speaker this year to give everyone a chance to view the exhibits.

Banquet Menu available on the AMSAT web site

At 5:00 PM on Friday afternoon there will be a special showing of the IMAX movie "Space Station". This movie is approximately 47 minutes long and contains about 4 minutes of amateur radio contacts between school children and the International Space Station. The IMAX theater is located in the museum building off the main lobby area. Attendees at the movie will be able to go to the banquet at 6:00 PM when the doors open about 10 minutes after the movie is over. The lobby contains restrooms, telephones and some seating. At least 50 people must sign up for the movie in advance. Call the museum IMAX theater on (937)-253-IMAX to make reservations. Special rates apply for children and seniors. Adults are $6.00, seniors are $5.50 and children 8 through college 22 (student ID required) are $4.50.

[ANS thanks Gould, WA4SXM,for the above information]

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SB SAT @ AMSAT $ANS-077.02
Suitsat-2 Hardware Takes Shape

AMSAT News Service Bulletin 077.02
From AMSAT HQ SILVER SPRING, MD.
March 18, 2007
To All RADIO AMATEURS
BID: $ANS-077.02

Bob McGwier, N4HY, AMSAT's VP of Engineering provided the following update on the development of hardware for Suitsat-2.

We had a complete breakthrough on the Odyssey Siren in the past two weeks. It will be used in Suitsat 2, in a terrestrial linear repeater experiment by Viktor Kudielka OE1VKW and friends, who supported its development, and we are already leaping all over the place to applications.

Frank Brickle and I will be doing our SDR code on it over the next several days. The board as shown in the schematic needs some modifications to fix the 3 - ish volt power supply for the Codec and a modified oscillator circuit but we are certain it will all work now.

On the 10.7 MHz IF, I measured 0 dBm max into a 50 ohm load and less than -120 dBm MDS and > 80 dB dynamic range. This is with a BOM of <$50 in parts and about a $20 dsp pic chip!

Yesterday in Rick's, W2GPS, lab, with Tom, K3IO, we made the above measurements, hacked on code and turn the thing into a bent pipe transponder. I also did the hilbert transform to make it an inverting transponder. It all worked perfectly.

Detected audio in an SDR-IQ SDR as well as captured IF from the SDR-IQ of the transponder. Can be downloaded and heard from: http://www.cnssys.com/~w2gps/amsat_files/suitsat/

We have to balanced for image and do DC offset correction but the thing works and sounds great as you can hear for yourself!

Additional details and pictures of the hardware can be found at

http://hpsdr.org/wiki/index.php?title=ODYSSEY

[ANS thanks Bob, N4HY, for the above information]

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SB SAT @ AMSAT $ANS-077.03
OSCAR I Pioneer SK

AMSAT News Service Bulletin 077.03
  From AMSAT HQ SILVER SPRING, MD.
March 18, 2007
To All RADIO AMATEURS
BID: $ANS-077.03

Passing away last week, we remember a WWII vet who helped launch the 1st civilian satellite.

Richard 'Dick' Esneault never had a day of basic training, never fired a shot in a war and never finished college.

But the electronics whiz of the 1940s was a highly-sought-after non-combatant soldier during World War II. He also became a successful Huntsville business owner during the height of the 1960's boom.

Outside his family, Esneault's biggest accomplishment was his role in helping develop and launch the first civilian satellite, OSCAR (Orbiting Satellite Carrying Amateur Radio), made by a group of ham radio operators.

The 10-pound, three-watt radio transmitter was launched Dec. 12, 1961, from Vandenberg Air Force Base in California, riding on the back of an Atlas-Agena booster carrying a military reconnaissance satellite. Its Morse code message, "Hi," was received by more than 570 radio amateur tracking stations in 28 countries.

The homemade satellite, built primarily from donated parts at an out-of-pocket cost of $63, beat the multimillion-dollar satellite Telstar to space by seven months.

It captured the attention of broadcast legend Edward R. Murrow, who told then-President John Kennedy about it.

Kennedy said of OSCAR: "This is exactly what we're looking for.. a peaceful use of space."

In a Dec. 12, 1986, article in The Times, Esneault said Kennedy was responsible for giving OSCAR the go-ahead to ride aboard a military mission.

Esneault became an avid ham radio operator and received his license at age 13.
While in high school, he took night lessons to learn Morse code so he could be certified by the Federal Communications Commission. His instructor was so impressed with his aptitude, he offered the teenager a job with Pan American World Airways.

Another case of "We are History, We are Ham Operators".

[ANS thanks John, VK5BUI, for the above information]

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SB SAT @ AMSAT $ANS-077.04

Call for donations for ARISS Antennas on Columbus

AMSAT News Service Bulletin 077.04
From AMSAT HQ SILVER SPRING, MD.
March 18, 2007
To All RADIO AMATEURS
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This week Gaston Bertels, ON4WF, ARISS-Europe chairman discussed the planned amateur radio station to be installed aboard the European Space Agency's Columbus Space Laboratory module which will be added to the International Space Station.

The microwave panel antenanas, attached to the Meteorite Debris Panels of the Columbus Space Laboratory, will allow operationgs on new frequencies that will enable ARISS to establish wideband and video operations for the first time. This facility will provide ATV facilities for School contacts and allow continuous transponder operation. Also, With the Columbus module being located at some considerable distance from the other two ARISS stations aboard the ISS, this new antenna configuration will permit parallel operations on the new bands at the same time as the existing operations.

The development of the antennas is presently taken care of by the Institute of Telecommunications and Acoustics of the Wroclaw University of Technology. The Columbus antennas will work on L-band and S-band.

Taking into account that time is getting really short, ARISS-Europe renews the call for donations to the IARU and AMSAT societies as well as to their members individually.

A financial account has been opened by AMSAT Belgium. Donators within the European Union will not have to pay any additional banking costs (beyond the costs of a national money transfer) if they use the following inter- national banking number (IBAN) and mention the international identification code (BIC), reference the transfer as "Donation Columbus":

AMSAT Belgium
001-2306592-08

IBAN BE63 0012 3065 9208
BIC GEBABEBB

If you have a PayPal account you can easily make a donation by using the "Donate" button in the left column. Even if you don't have a PayPal account you can use your creditcard to make a Paypal donation for the Columbus project by clicking the "Donate" button and follow instructions.

[ANS thanks Gaston, ON4WF, for the above information]

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SB SAT @ AMSAT $ANS-077.05
Call for Papers--2007 ARRL/TAPR Digital Communications Conference

AMSAT News Service Bulletin 077.05
From AMSAT HQ SILVER SPRING, MD.
March 18, 2007
To All RADIO AMATEURS
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Technical papers are solicited for presentation at the 26th Annual ARRL

and TAPR Digital Communications Conference to be held September 28-30, 2007 in Hartford, Connecticut. These papers will also be published in the Conference Proceedings (you do NOT need to attend the conference to have your paper included in the Proceedings). The submission deadline is July 31, 2007. Please send papers to:

Maty Weinberg
ARRL
225 Main St
Newington, CT 06111

or you can make your submission via e-mail to: maty@arrl.org

Papers will be published exactly as submitted and authors will retain all rights.

[ANS thanks Steve, WB8IMY, for the above information]

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SB SAT @ AMSAT $ANS-077.06
ARISS Status - 12 March 2007

AMSAT News Service Bulletin 077.06
  From AMSAT HQ SILVER SPRING, MD.
March 18, 2007
To All RADIO AMATEURS
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1. Illinois School Contact Successful

On Tuesday, March 6, students at Boulder Hill Elementary School in Montgomery, Illinois participated in an Amateur Radio on International Space Station
(ARISS) contact. Twenty-three children from the Boulder Hill Radio Club were able to ask one question each of Sunita Williams, KD5PLB. The audio was fed into the EchoLink AMSAT (101 377) and JK1ZRW (277 208) servers (15 connections from six countries), as well as the IRLP Discovery Reflector 9010. Several newspapers covered the event. The Beacon News posted an article on its website. See:
http://www.suburbanchicagonews.com/beaconnews/news/286091,2_1_AU07_RADIO_S1.article

Several local dignitaries attended including the mayor of Oswego who remarked, ï¿½A very impressive presentation. I ran a Summer Science Camp in Naperville 203 Schools for 17 years until I retired last year and wish we could have had this experience for our science campers since our focus was on space travel and students built rockets and robots. Your presentation was mentioned at this mornings's Rotary Club meeting and we who were present applauded your efforts, your clubs hard work, and the students'/teachers tremendous interest.ï¿½

The School Superintendent also sent thanks ï¿½for bringing a very special, history making event to the kids and the community. I am certain our kids will never forget yesterday. I know I wonï¿½t.ï¿½

Another thank you from the ARISS-Boulder Hill contact control operator was posted to the ISS Fan Club webpage. See:
http://www.issfanclub.com/node/5743#comment-11410

2. Mission Viejo School Contact Successful

On Friday, March 9, Mike Lopez-Alegria, KE5GTK, spoke with 9-12th graders from Mission Viejo High School in California, (Mikeï¿½s alma mater), during an Amateur Radio on the International Space Station (ARISS) contact. Originally planned for March 8, the school experienced technical difficulties, and the contact was rescheduled for the next day. The astronaut answered 13 questions posed to him by thirteen students. The audio was streamed live on the University of California, Irvine website. Audio was also fed into the Echolink AMSAT server, which received 9 connections, including 2 repeaters, from the U.S., Japan, the Netherlands and Australia. The Orange County Register ran an article on its website covering the event entitled, ï¿½Students pick brain of O.C. astronaut.ï¿½ See:
http://www.ocregister.com/ocregister/sciencetech/abox/article_1614937.php

3. ARISS Contact Excites School Children

Nathan McCray, K9CPO, who teaches at East Elementary School in Wisconsin, left his ham radio turned on in the classroom in case any contacts with the Space Station might be heard. He was fortunate enough to pick up on an Amateur Radio on the International Space Station (ARISS) school contact which grabbed his studentsï¿½ attention for the next several minutes. One of the students participating in the contact asked how fast the space station traveled and when Sunita gave the answer ï¿½over 17,000 mph,ï¿½ the class made a collective ï¿½Oooohï¿½ sound! Afterwards, the teacher took the opportunity to teach a mini-lesson on geography and math using the information presented in that short ARISS contact. The students have repeatedly asked him, ï¿½When can we talk to the astronauts?ï¿½ He is now in the process of filling out an application.

4. Virginia Run Elementary School Contact Update

Virginia Run Elementary School experienced an Amateur Radio on the International Space Station (ARISS) contact on March 2. The American Radio Relay League covered the event with a story posted on its website. See: http://www.arrl.org/news/stories/2007/03/06/101/?nc=1
Photos of the contact are available on:
http://www.viennawireless.org/ariss.php

[ANS thanks Carol, KB3LKI for the above information]

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In addition to regular membership, AMSAT offers membership in the President's Club. Members of the President's Club, as sustaining donors to AMSAT Project Funds, will be eligible to receive additional benefits. Application forms are available from the AMSAT Office.

73,
This week's ANS Editor,
Lee McLamb, KU4OS